

Date: Thursday, 3/13/2008 10:16:45 AM
 User: Kim Johnston



Process Sheet

13



Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : FWD X-TUBE EXTENDED HEIGHT GEAR (-011)
Job Number : 37904	
Estimate Number : 10007	
P.O. Number :	Part Number : D205596101
This Issue : 3/13/2008 S.O. No. :	Drawing Number : D205-596-101
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : LANDING GEAR	Drawing Revision : B
Previous Run : 37903	Material :
Written By :	Due Date : 3/27/2008 Qty: 1 Um: Each
Checked & Approved By : <i>[Signature]</i> 08 03 13	
Comment : Est Rev G Removed Bending 05-10-25 JLM Est Rev:H ECN 1075 08-01-10 DD	

Additional Product



Job Number:	
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Seq. #	Machine Or Operation:	Description :
0.0000	DC	DOCUMENT CONTROL
		



Comment: DOCUMENT CONTROL
 Photocopy D205-594 bluefile & type labels per PPP D205-596-101 CHG001002 08/03/14 *[Signature]*

2.0	D2889	FWD Crosstube
		

Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
 FWD Crosstube
 Pick:
 Qty Part number Description Batch
 1 D2889 Fwd Crosstube *B38535 DP 8-8-12*



3.0	BENDING	BENDING MACHINE
		

Comment: BENDING MACHINE
 Bend as per Dwg D2889 *DP 8-8-12*

4.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
		

see attachment *08-01-07*

Comment: LANDING GEAR RESOURCE 1
 Mark 31.53" for cutting from tangential line in the straight section from D2889 as per Dwg wall template
 Identify off-cuts with batch number & part number and bring them to cnc lathe *DP 8-8-12*

5.0	QC15	DIMENSIONAL CHECK OF X-TUBES
		

08-08-12 ①

Comment: DIMENSIONAL CHECK OF X-TUBES

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 3/13/2008 10:16:45 AM

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD X-TUBE EXTENDED HEIGHT GEAR (-011)

Job Number: 37904

Part Number: D205596101

Job Number:



Seq. #:

Machine Or Operation:

Description:

6.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut as per Dwg D205-596-101

2-Deburr & Inspect for surface damage. Polish cut surface. Scribe part # and end of tube.

Batch # on one

PT 08-04-07

see attachment

7.0

QC15

DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

08/08/13

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat per QSI 005 4.1

PT 08-08-13

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/08/13

10.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

Prime inside and outside with Immron per QSI 005 4.2

ml 08 08 13 (1)

11.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

PT 08-08-14

12.0

D3595063450

RUBBER CUSHION



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

RUBBER CUSHION

batch 38500

ml 08 08 14

13.0

MS2192025

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Clamp(per MIL-DTL-8783C)

batch 108111

ml 08 08 14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 3/13/2008 10:16:45 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD X-TUBE EXTENDED HEIGHT GEAR (-011)

Job Number: 37904

Part Number: D205596101

Job Number:



Seq. #:

Machine Or Operation:

Description:

14.0

D28931

Support



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Support

Pick:

Qty Part number Description Batch

2 D2893-1

Support

38124

ml 08 08 14

15.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1- Apply magnobond 6398 as per dwg D205-596-101.

Magnobond 6398 Batch:

2-Install supports and clamps as per Dwg D205-596-101. Torque clamps to 80-100 in lb. as per dwg

see attachment

mf 08-04-07

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08-08-18 (1)

17.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

N/A

pk

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-596-101

Location:

Perf

8/8/18

SU

19.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/08/19 Jf

Job Completion



mf 08-08-18

B 37904 D205-596-101

WIO: 37904

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
08-08-18	17-0	QC 4 not required. Remove. ESTIMATE # 10007				<i>[Signature]</i> 125442	<i>[Signature]</i> 08-08-18

Part No: D205-596-101 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

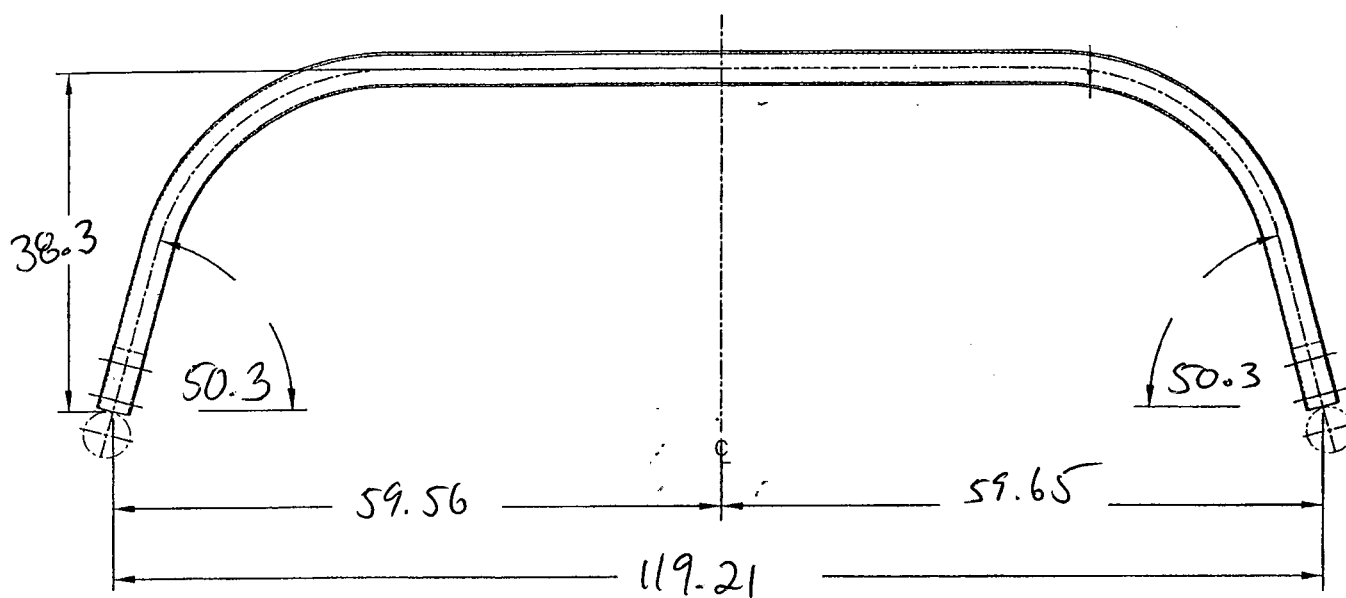
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	37904
Description: Crosstube High-High Fwd		Part Number:	D205-596-101
Inspection Dwg: D205-596-101	Rev: AB		Page 1 of 1

Required Dimension	Min	Max
Height	38.2	38.4
1/2 Span	59.5	59.7
Angle	49	52
Total Span	119.0	119.4



Comments

QC15 Inspection	
Date	08.08.12

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	

PARTS LIST:

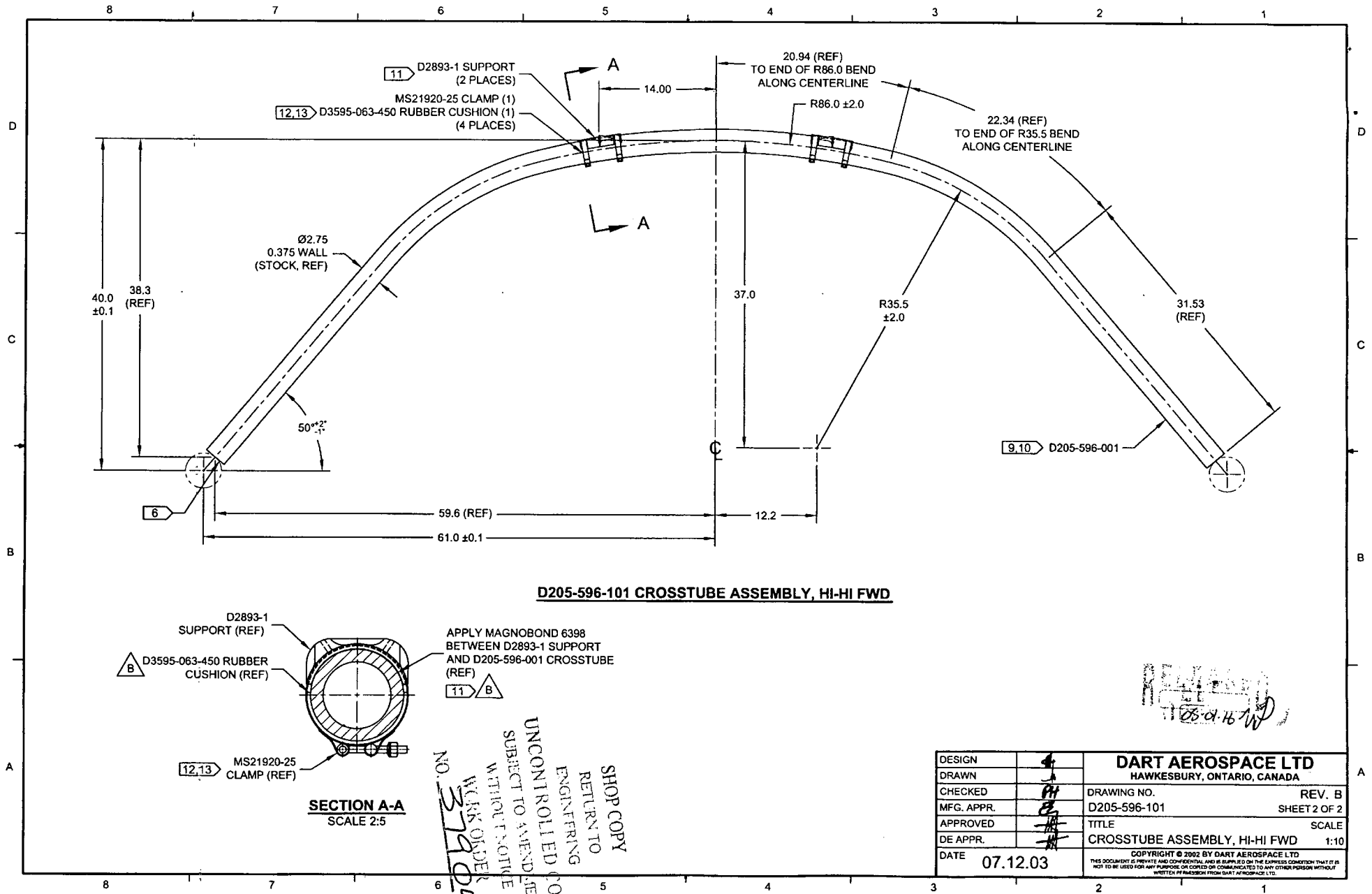
Qty	Part Number	Description
X	D205-596-101	CROSSTUBE ASSEMBLY, HI-HI FWD
1	D6005-180	CROSSTUBE
2	D2893-1	SUPPORT
4	D3595-063-450	RUBBER CUSHION
4	MS21920-25	CLAMP
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURE FROM D6005-180
FINISHED LENGTH = 149.60 ± 0.02
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH
VIBRATING STYLUS
- 7) WEIGHT: 44 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE
- 9) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO
BENDING IS 6% BASED ON O.D.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2893-1 THAT
WILL BE IN CONTACT WITH THE CROSSTUBE. LET CURE FOR 12 HOURS AFTER INSTALLATION
AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-25 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE D2893-1
SUPPORT ON THE TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE
CROSSTUBE SUPPORT.
**NOTE: IT IS ACCEPTABLE TO SUBSTITUTE MS21920-25 CLAMPS WITH LONGER (MS21920-26) OR
SHORTER (MS21920-24) CLAMPS TO ACCOMODATE VARYING DIAMETERS. ENSURE THERE IS A
MINIMUM OF 1.5 THREADS IN SAFETY ON THE NUTS.**
- 13) TORQUE CLAMPS 80 TO 100 IN-LB

RELEASED
06-01-16
WORK ORDER
NO 37904

B	SUPPORT NOW MAGNOBONDED; REMOVE D2856-600-851 ABRASION STRIP; UPDATED NOTES; ADDED D3595-063-450 CUSHION; MS21920-25 WAS MS21920-24	MB	07.12.03
A	NEW ISSUE	DS	02.05.27
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D205-596-101	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE ASSEMBLY, HI-HI FWD	NTS
DATE	07.12.03	COPYRIGHT © 2002 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



Date: Friday, 04/04/2008 11:15:56 AM
 User: Melanie Fauteux

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: FWD X-TUBE EXTENDED HEIGHT GEAR (-011)
Job Number	: 37904		
Estimate Number	: 10007		
P.O. Number	:	Part Number	: D205596101
This Issue	: 04/04/2008	S.O. No.	:
Prsht Rev.	: NC	Drawing Number	: D205-596-101
First Issue	: 13/03/2008	Project Number	: N/A
Previous Run	: 37903	Drawing Revision	: B
		Material	:
Written By	:	Due Date	: 27/03/2008
Checked & Approved By	:	Qty:	1 Um: Each
Comment	: Est Rev G Removed Bending 05-10-25 JLM Est Rev:H ECN 1075 08-01-10 DD		

Additional Product

Job Number:



REFERENCE ONLY

Seq. #:	Machine Or Operation:	Description :
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4.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1



Mark 31.53" for cutting from tangential line in the straight section from D2889 as per Dwg wall template.

Identify off-cuts with batch number & part number and bring them to cnc lathe

Job Completion



Date: Friday, 04/04/2008 11:13:25 AM
 User: Melanie Fauteux

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : FWD X-TUBE EXTENDED HEIGHT GEAR (-011)
Job Number : 37904	
Estimate Number : 10007	
P.O. Number :	Part Number : D205596101
This Issue : 04/04/2008 S.O. No. :	Drawing Number : D205-596-101
Prsht Rev. : NC	Project Number : N/A
First Issue : 13/03/2008 Type : LANDING GEAR	Drawing Revision : B
Previous Run : 37903	Material :
Written By :	Due Date : 27/03/2008 Qty: 1 Um: Each
Checked & Approved By :	
Comment : Est Rev G Removed Bending 05-10-25 JLM Est Rev:H ECN 1075 08-01-10 DD	

Additional Product

Job Number:



REFERENCE ONLY

Seq. #:	Machine Or Operation:	Description :
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6.0	CROSSTUBES	CROSSTUBES RESOURCE 1
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Comment: LANDING GEAR RESOURCE 1

1-Cut as per Dwg D205-596-101

JT 08-08-12

2-Deburr & Inspect for surface damage. Polish cut surface. Scribe part # and end of tube.

Batch # on one

JT 08-08-13

Job Completion



Date: Friday, 04/04/2008 11:14:36 AM
User: Melanie Fauteux

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: FWD X-TUBE EXTENDED HEIGHT GEAR (-011)
Job Number	: 37904		
Estimate Number	: 10007		
P.O. Number	:	Part Number	: D205596101
This Issue	: 04/04/2008 S.O. No. :	Drawing Number	: D205-596-101
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: 13/03/2008 Type : LANDING GEAR	Drawing Revision	: B
Previous Run	: 37903	Material	:
Written By	:	Due Date	: 27/03/2008 Qty: 1 Um: Each
Checked & Approved By	:		
Comment	: Est Rev G Removed Bending 05-10-25 JLM Est Rev:H ECN 1075 08-01-10 DD		

Additional Product

Job Number:



mf

REFERENCE ONLY

Seq. #:	Machine Or Operation:	Description :
15.0	CROSSTUBES	CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1- Apply magnobond 6398 as per dwg D205-596-101.

Magnobond 6398 Batch: 107621

exp: 08/2009 time: 9:50am

ml 08 08 14 (1)

2-Install supports and clamps as per Dwg D205-596-101. Torque clamps to 80-100 in lb. as per dwg

ml 08 08 18 (1)

Job Completion

